

AN APPLIANCE HAVING A CONTAINER INCLUDING A
NANOSTRUCTURED MATERIAL FOR HYDROGEN STORAGE

ABSTRACT OF INVENTION

[0070] An appliance that uses a substantially carbon-free hydrogen is disclosed. The appliance includes a converter, a hydrogen storage container including a carbon-based nanostructured material, a charger, a discharger and, optionally, a controller is disclosed. The hydrogen storage container is capable of storing the substantially carbon-free hydrogen in a condensed state. In addition to the carbon-based nanostructured material, the container may include a metal capable of acting as both a seed for the formation of the nanostructured material and a facilitator for promoting the storage in the condensed state of the substantially carbon-free gaseous hydrogen provided to the storage container.